

FINAL BID DOCUMENTS

PP101

Dwg.

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one eighth inch = one foot

0 4 8 16

VA FORM 08-6231

HILLIARD ARCHITECT

3 4 5

ARCHITECT/ENGINEERS:

HILLIARD ARCHITECTS, INC 251 Post Street, Suite 620 San Francisco, CA 94108-5017 Tel 415 989 6400, Fax 415 989 3056 www.HilliardArchitects.com

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Drawing Title PLUMBING FIRST FLOOR PLAN Approved: Project Director

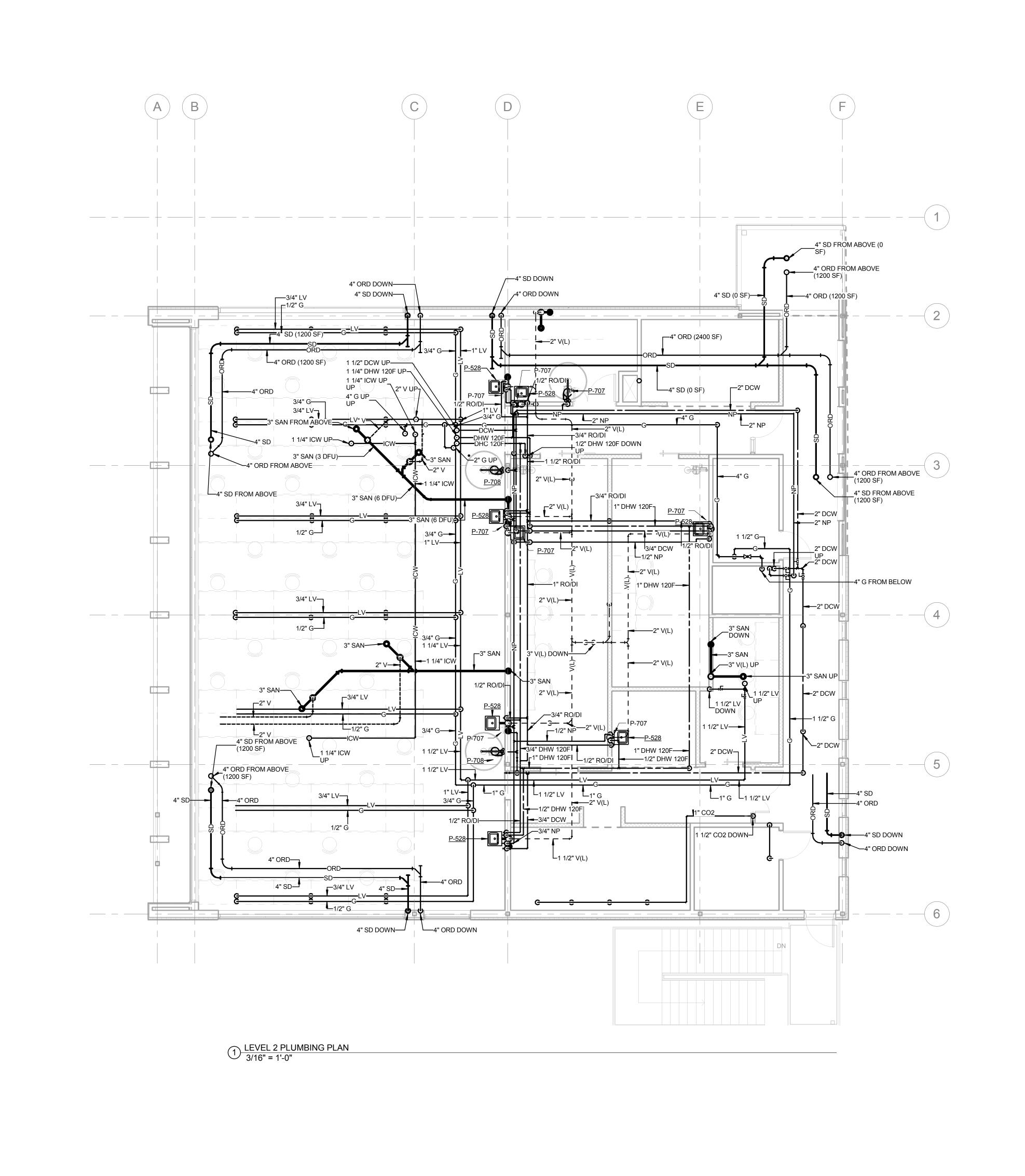
Project Number **GENOMICS CLINICAL** 640-389 RESEARCH CENTER, Building Number **PALO ALTO** Drawing Number VAPAHCS - PALO ALTO Checked

Checker

06/05/2014

Office of Construction and Facilities Management





FINAL BID DOCUMENTS

									FINAL	BID DOCUMENTS
	CONSULTANTS:		ARCHITECT/ENG	GINEERS:	Drawing Title PLUMBING SECOND FLOOR	Project Title GENON	IICS CLIN	ICAL	Project Number 640-389	Office of
		Syska Hennessy Group, Inc.	88 HILLIARD A	HILLIARD ARCHITECTS, INC	PLAN	RESEAL PALO A	RCH CEN [.]	TER,	Building Number 51	Construction and Facilities
	CVCVA HENNIEGOV	425 California Street Suite 700 San Francisco, CA 94104 Tel: 415.288.9060	SLISHED 19 SCHILLEC	251 Post Street, Suite 620 San Francisco, CA 94108-5017 Tel 415 989 6400, Fax 415 989 3056	Approved: Project Director	Location VAPAHCS - PA			Drawing Number PP102	Management
Revisions: Date		Fax: 415.835.0385 www.syska.com	S GOING GREEN	www.HilliardArchitects.com		Date 06/05/2014	Checked Checker	Drawn Author	Dwg. of	Department of Veterans Affairs

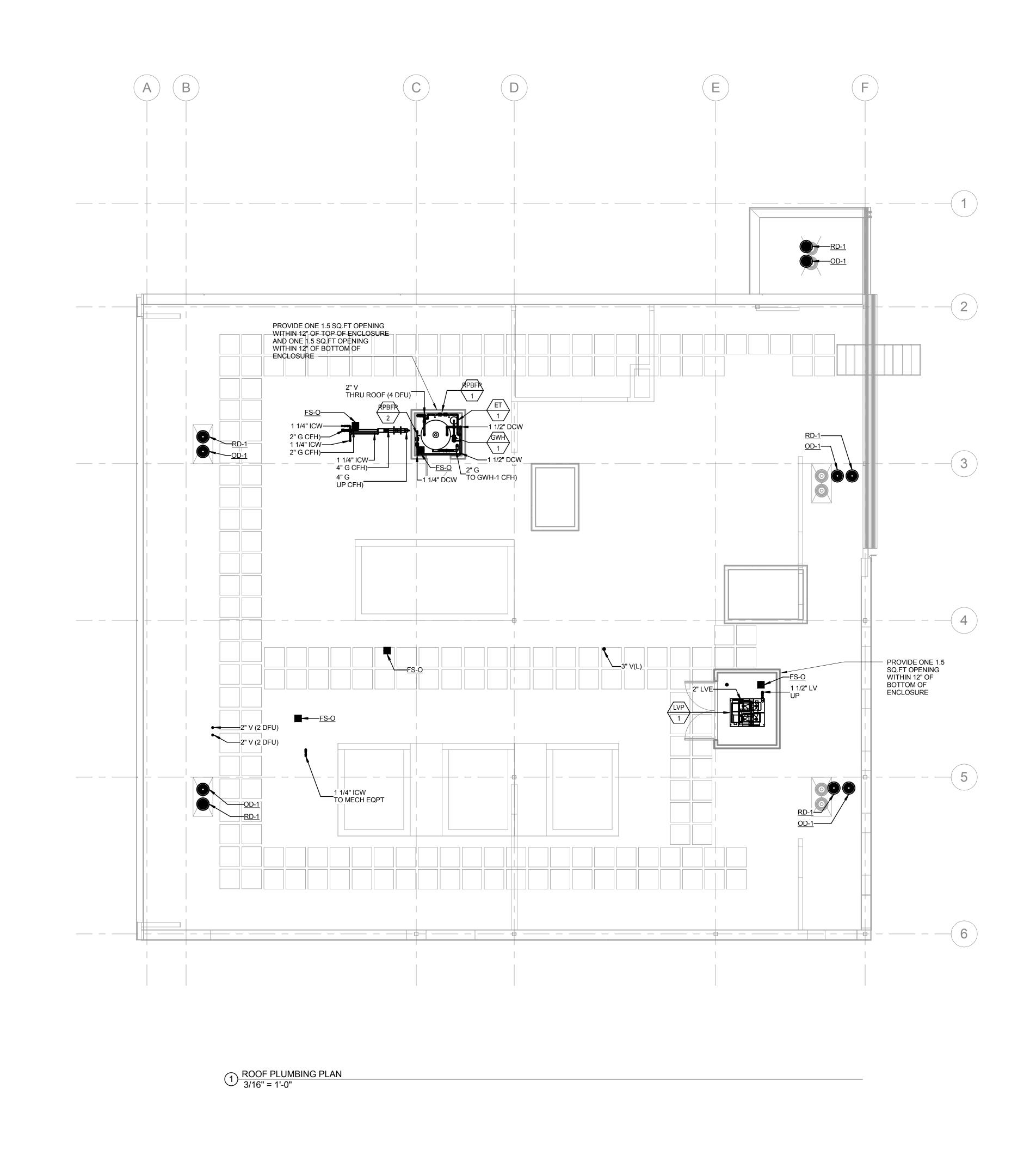
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one quarter in 0

one eighth inch = one foot

0 4 8 16

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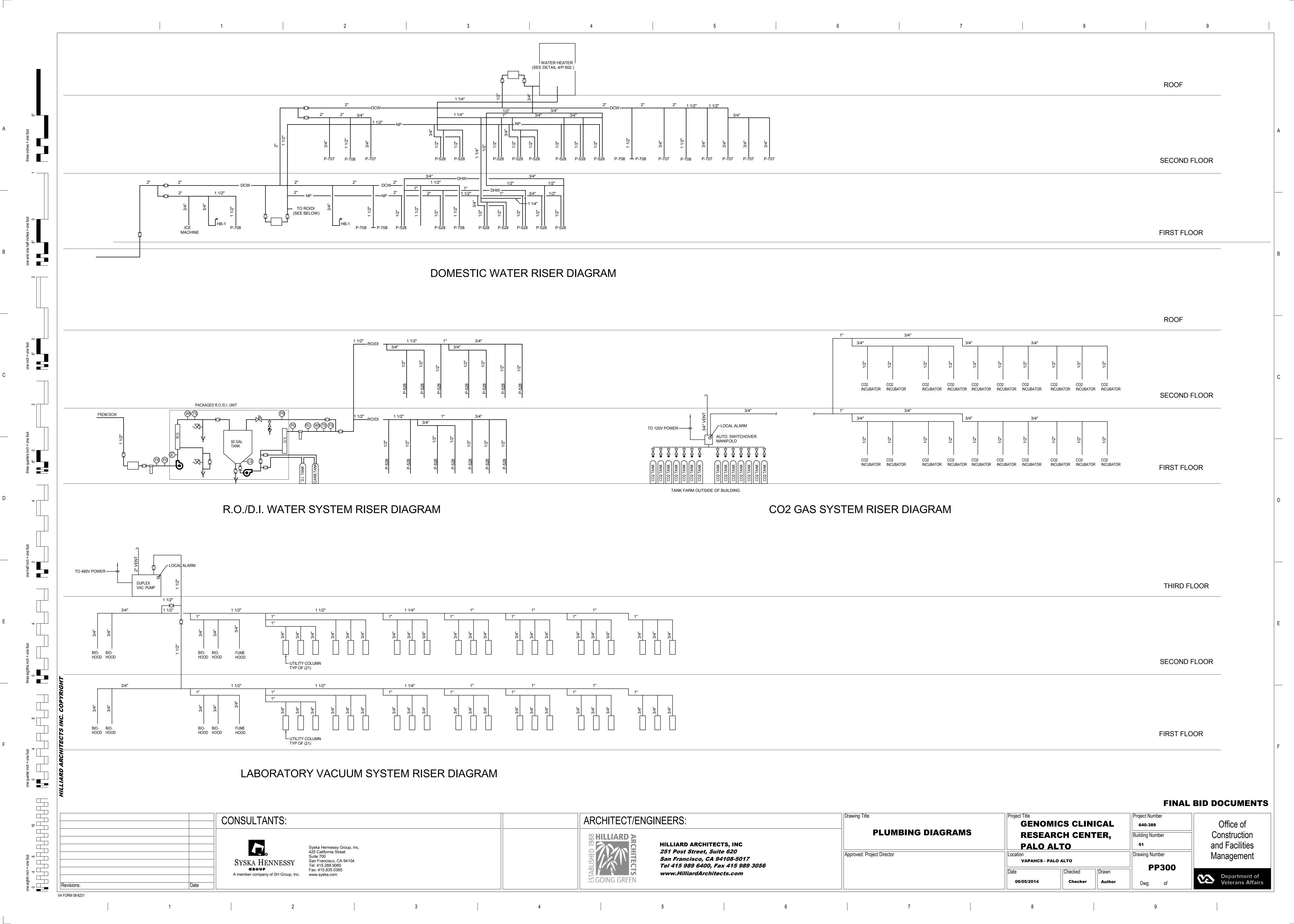


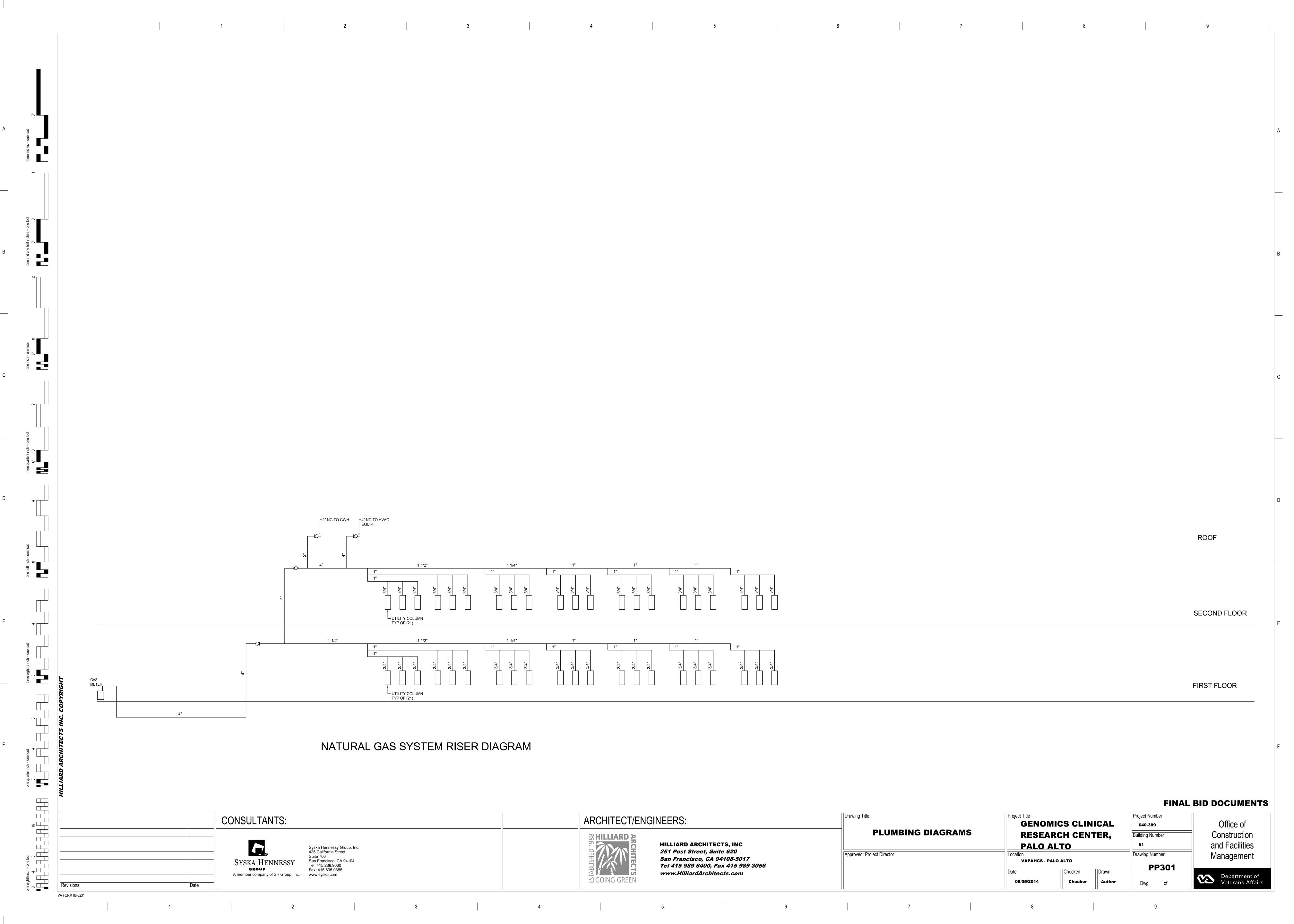
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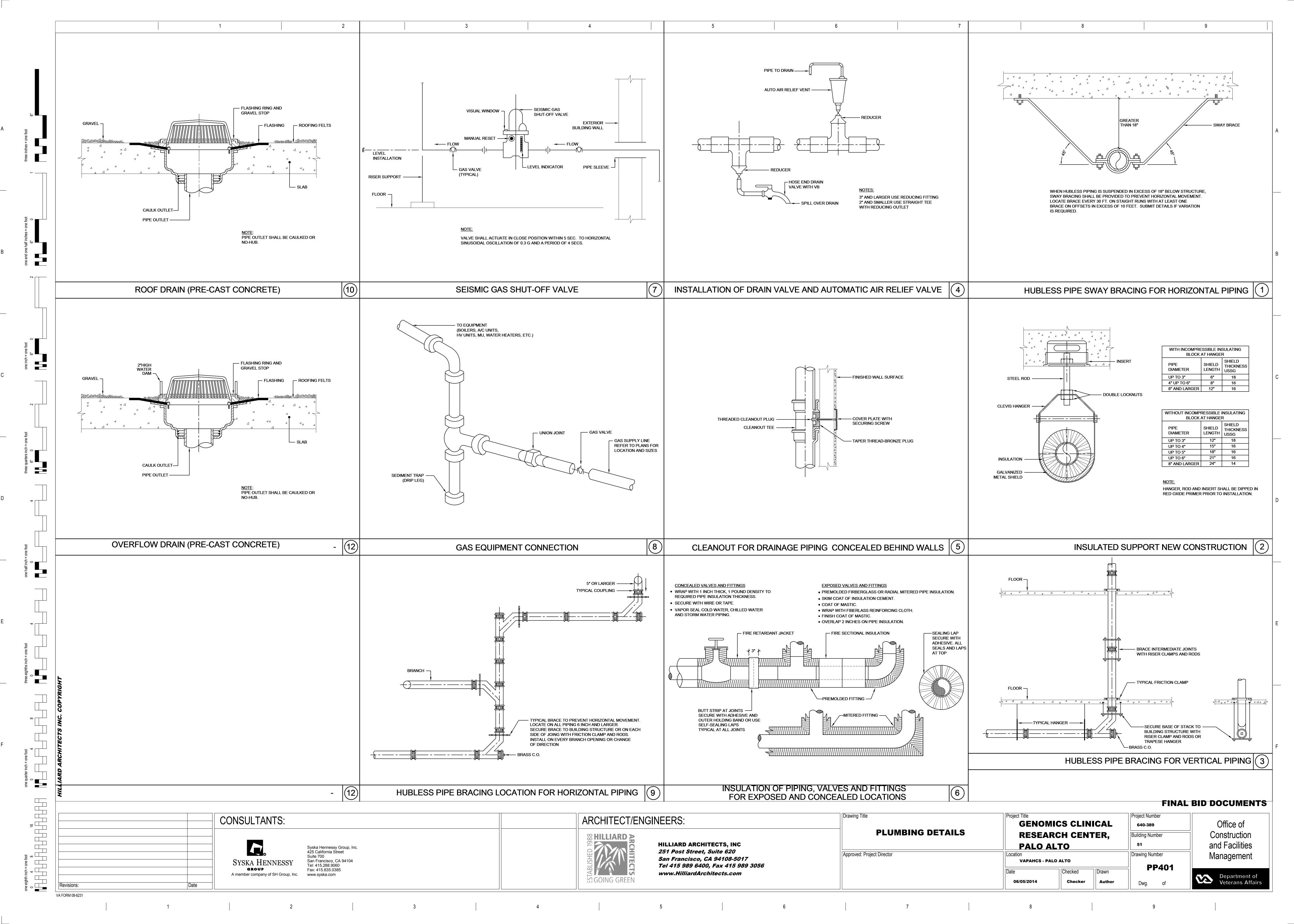
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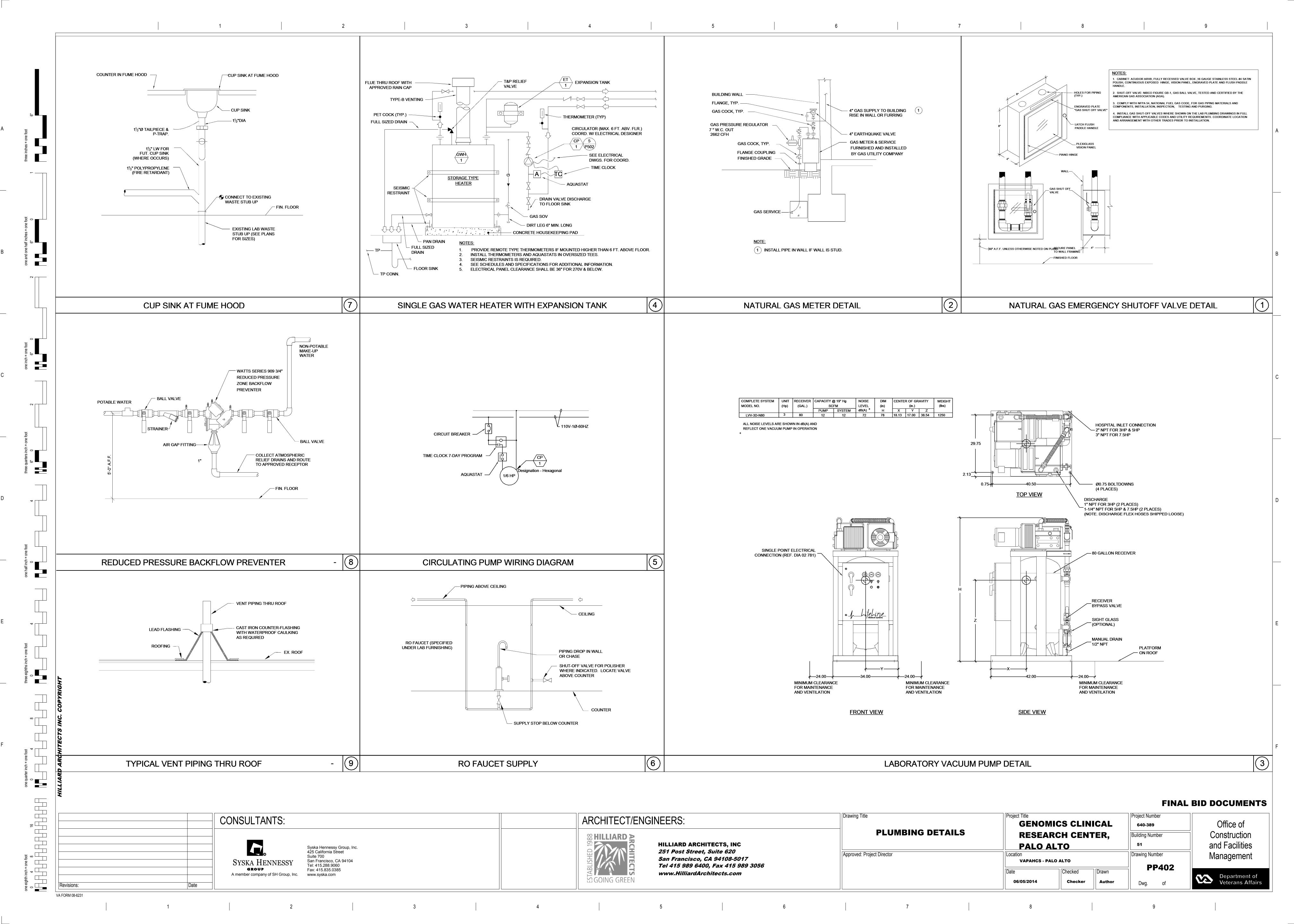
		CONSULTANTS:	ARCHITECT/ENGINEERS:	Drawing Title	Project Title GENOMICS CLINICAL	Project Number 640-389	Office of
			% HILLIARD ≥	PLUMBING ROOF PLAN	RESEARCH CENTER,	Building Number	Construction
		Syska Hennessy Group, Inc. 425 California Street Suite 700	HILLIARD ARCHITECT 251 Post Street, Suit San Francisco, CA 9 Tel 415 989 6400, Fa	Approved: Project Director	PALO ALTO Location	Drawing Number	and Facilities Management
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Revisions:	Data	A member company of SH Group, Inc. www.syska.com	S GOING GREEN www.HilliardArchite	ects.com	Date Checked Drawn 06/05/2014 Checker Author	Dwg. of	Department of Veterans Affairs

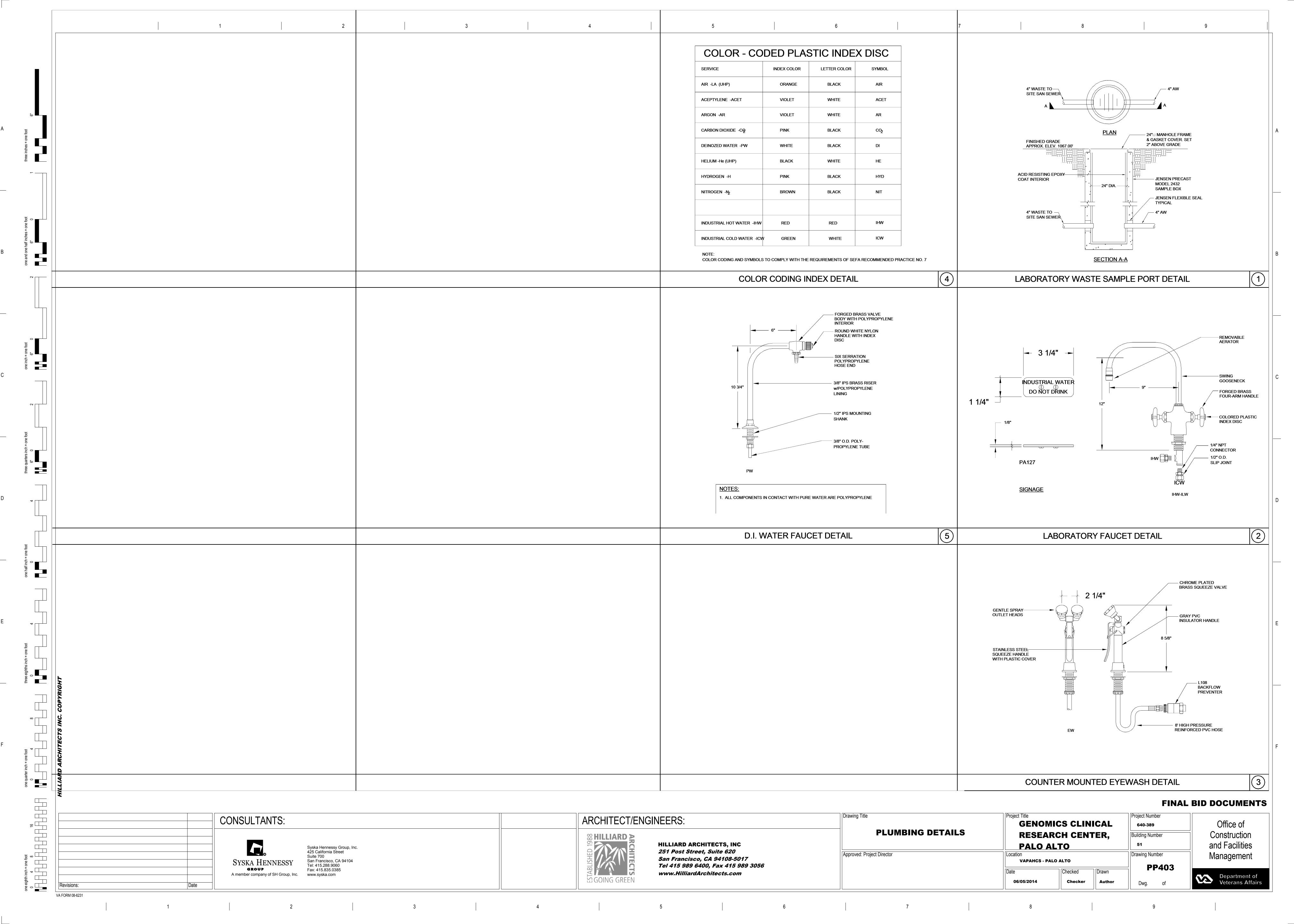
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	PI	PE MATERIAL SCHEDU	ILE	
SERVICE	PIPE	FITTINGS	REMARKS	MARK
DOMESTIC WATER SYSTEM ABOVE GROUND 4" & SMALLER	SEAMLESS COPPER TUBING, TYPE L, DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16,23, ANSI B16.18	JOINTS: APPROVED LEAD FREE SOLDER OR BRAZED LEAD FREE. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.	ET 1
NON-POTABLE WATER SYSTEM	SEAMLESS COPPER TUBING, TYPE L, DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16,23, ANSI B16.18	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER. PROVIDE APPROVED PIPE LABEL STATING "NON-POTABLE WATER". SEE 8-1/2"x11" BOOK SPECIFICATIONS.	
SOIL, WASTE, AND VENT ABOVE GROUND 2" & LARGER	SERVICE WEIGHT CAST IRON HUBLESS SOIL PIPE CONFORM TO CISPI 301, NSF LISTED	SERVICE WEIGHT CAST IRON NO-HUB TYPE SOIL FITTINGS CISPI 301 WITH NEOPRENE GASKET AND STAINLESS STEEL BANDS AND SHIELD, NO-HUB COUPLINGS CISPI 310.		
SOIL, WASTE, AND VENT UNDERGROUND 2" & LARGER	EXTRA HEAVY CAST IRON HUB AND SPIGOT SOIL PIPE CONFORMING TO ASTM A-74, NSF LISTED	STANDARD WT. CAST IRON HUB AND SPIGOT FITTINGS CONFORMING TO ASTM A-74.	JOINTS: COMPRESSION GASKETS CONFORMING TO ASTM C564. SEE NOTE-3 BELOW FOR UNDERGROUND PIPING.	
CONDENSATE INDIRECT DRAINAGE	SEAMLESS COPPER TUBING, TYPE M, HARD DRAWN TEMPER, ASTM B88 W/ INSULATION SIMILAR TO CEC SEC. 123, TABLE 1-G.	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER.	
GAS PIPING LOW PRESSURE 7"W.C. TO 4"W.C.	STANDARD WEIGHT SCHEDULE 40 BLACK STEEL FOR ABOVE GROUND	STANDARD WEIGHT 150 LBS. W.O.G. MALLEABLE IRON, WELDED FITTINGS FOR ABOVE GROUND		
ABORATORY ACUUM	SEAMLESS COPPER TUBING, TYPE K, HARD TEMPER, ASTM B88	WROUGHT COPPER, SILVER BRAZED-JOINT WITH CONTINUOUS NITROGEN PURGE, ANSI/AWS A5.8		
CARBON DIOXIDE	SEAMLESS COPPER TUBING, TYPE K, HARD TEMPER, ASTM B88	WROUGHT COPPER, SILVER BRAZED-JOINT WITH CONTINUOUS NITROGEN PURGE, ANSI/AWS A5.8		
RO/DI WATER	POLYPROPYLENE SCH. 80 PIPING CONFORMING TO ASTM D4101	POLYPROPYLENE SOCKET FUSION JOINTS.		
1. ALL DOMESTIC WA (WITH LAVATORY, SODIE SECTION 116) 2. CONTRACTOR SHA	TER PIPE, FITTING, VALVE, SOLDER AND FLUX, FIX SINK, DRINKING FOUNTAIN, WATER DISPENSER, ET 6875 (LEAD FREE) REQUIREMENTS. ALL COMPLY WITH GEOTECHNICAL CONSULTANT OF	C.) SHALL MEET THE CALIFORNIA ASSEMBLY BILL AB 1953,	NATER FOR HUMAN CONSUMPTION THROUGH DRINKING OR COOKING NSF/ANSI STANDARD 61 ANNEX G, AND CALIFORNIA HEALTH SAFETY ONS TO ALL BURRIED FERROUS PIPING'S CORROSION PROTECTION	
LABC	RATORY CO2 CALC	CULATION	LABORATORY VACUUM CALCU	LATION
ROOM NAME	RM. NO. QTY @	SCFM EA = TOTAL USEAGE SCFM	ROOM NAME RM. NO. QTY @ SCFM EA	A = TOTA USEAC SCFM
	_		-	A = 1.
TC LARGE TC SMALL TC LARGE TC SMALL	G106 6 @ G104 4 @ G206 6 @ G204 4 @ - 0 @	1 EA = 6 1 EA = 4 1 EA = 6 1 EA = 4 1 EA = 0	TC LARGE G106 3 @ 0.5 EA TC SMALL G104 2 @ 0.5 EA FUME HOOD G105 1 @ 0.5 EA OPEN LAB G107 36 @ 0.5 EA TC LARGE G206 3 @ 0.5 EA	A = 1 A = 0.5 A = 18

SIMULTANIOUS ALTITUDE PEAK CALCULATED USE FACTOR FACTOR DEMAND SCFM

TOTAL USEAGE GPM

32.0

0.6

G106 1 @ 0.5 EA = 0.5
G104 1 @ 0.5 EA = 0.5
G107 4 @ 0.5 EA = 2.0
G105 1 @ 0.5 EA = 0.5
G107 2 @ 3.0 EA = 6.0

G206 1 @ 0.5 EA = 0.5

G204 1 @ 0.5 EA = 0.5

G207 4 @ 0.5 EA = 2.0

G205 1 @ 0.5 EA = 0.5

G207 2 @ 3 EA = 6.0

G210 1 @ 13 EA = 13.0

0.4

SIMULTANIOUS ALTITUDE PEAK CALCULATED USE FACTOR FACTOR DEMAND GPM

R.O.D.I. WATER CALCULATION

TC SMALL

OPEN LAB
FUME HOOD
OPEN LAB - GLASS WASHER

TC LARGE

FUME HOOD OPEN LAB - GLASS WASHER

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AUTOCLAVE ALCOVE

TOTALS

RM. NO. QTY @ GPM

QTY SIMULTANIOUS ALTITUDE PEAK CALCULATED DEMAND SCFM

QTY SIMULTANIOUS ALTITUDE PEAK CALCULATED USE FACTOR FACTOR DEMAND CFH

0.4

TOTAL USEAGE CFH

28.8

0.4

LABORATORY NAT. GAS CALCULATION

RM. NO. QTY @ CFH

TOTALS

ROOM NAME

OPEN LAB

TOTALS

CW HW W V POWER VOLTAGE PROVIDE UPSTREAM OF INLET TO WATER HEATER. PROVIDE SEISMIC 4	MARK	DESCRIPTION		PIPE SIZE			Ī	HEDULE TRICAL DATA		DETAIL
FXPANSION TANK 3/4" WATER HEATER. PROVIDE SEISMIC / 4	MARK	DESCRIPTION	CW	HW	w	V	POWER	VOLTAGE	REMARKS	DETAIL
	ET 1	EXPANSION TANK	3/4"	-	-		-	-	WATER HEATER. PROVIDE SEISMIC	4 RP-402

	BACKFLOW PR	REVEN	TOR SCHEDULE
MARK	DESCRIPTION	PIPE SIZE (INCHES)	REMARKS
		CW	
BFP-1	REDUCE PRESSURE BACKFLOW PREVENTOR	3/4	-
BFP-2	REDUCE PRESSURE BACKFLOW PREVENTOR	1	-
BFP-3	REDUCE PRESSURE BACKFLOW PREVENTOR	1-1/2	-

			PL	.UMI	BINC	3 FIX	KTUI	RE C	COU	NT			
	LV	LG	CYLIND	RT	wc	LAVS	SINKS	LAB SINK	MOP SINKS	DI	ES/EW	FD	FS
			N2	CO2	CW/D	HCW/D	HCW/D	HCW/D	HCW/D				
EXISTING FIXTURES	0	0	0	0	0	0	0	0	0	0	0	0	0
FIXTURES REMOVED	0	0	0	0	0	0	0	0	0	0	0	0	0
FIXTURES RELOCATED	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW FIXTURES	84	72	11	20	0	0	0	15	0	15	10	1	8
PLUS/MINUS	84	72	11	20	0	0	0	15	0	15	10	1	8
TOTALS	84	72	11	20	0	0	0	15	0	15	10	1	8

			MINIMUI	M BRANCH F	PIPE SIZE		FIXTUI	RE UNIT	WRIST	0111015	0000511501/	EL EATRIA II	TD 4 D	
TAG	DESCRIPTION	HW (IN)	CW (IN)	W (IN)	TRAP (IN)	V (IN)	SAN	WATER	BLADE HANDLE	SINGLE LEVER	GOOSENECK SPOUT	ELECTRICAL SENSOR	TRAP PRIMER	REMARKS
FD-C	FLOOR DRAIN	-	1/2	2	2	2	2	-	-	-	-	-	YES	FLOOR DRAIN (SINK), 6" SQUARE OR ROUND STRAINER, LIGHT DUTY GRATE CAST IRON BODY
FD-O	FLOOR DRAIN	-	1/2	2 4	2 4	2	2 8	-	-	-	-	-	YES	FLOOR DRAIN (SINK), 12" SQUARE, 6"DEEP, DOME STRAINER, ACID RESISTANT INTERIOR
FD-R	FLOOR DRAIN	-	1/2	3	3	2	6	-	-	-	-	-	YES	FLOOR DRAIN (SINK), 8" SQUARE, 6"DEEP, DOME STRAINER, ACID RESISTANT INTERIOR
P-528	SINK	1/2	1/2	2	1 1/2	2	2	2	-	-	-	-	-	SINK - CRS. SINGLE COMPARTMENT, SELF RIMMING, W/ BACK FAUCET LEDGE, GOOSENECK FAUCET W/ WRIST-BLADE HANDLES.
P-510	SINK	1/2	1/2	2	1 1/2	2	2	2	х	-	х	Х	-	SINK - CRS. SINGLE COMPARTMENT, SELF RIMMING, W/ BACK FAUCET LEDGE, GOOSENECK FAUCET, FOOT PEDALS AND ELECTRONIC FAUCET.
P-802	HOSE BIB	-	1/2	-	_	-	-	-	-	-	-	-	-	
P-707	EMERGENCY STATION	-	3/4	-	-	-	-	-	-	-	-	-	-	COUNTER MOUNTED EYE/FACE WASH SAFETY STATION
P-708	EMERGENCY EYE WASH/ SHOWER	-	1-1/2	-	-	-	-	-	-	-	-	-	-	EYE/FACE WASH W/ STLS. STL. BOWL AND COVER AND (4) SPRAY HEADS.
P-807	REAGENT GRADE FAUCET	-	1/2	2	1 1/2	2	2	1	-	х	х	-	-	FAUCET - GOOSENECK DECK MOUNTED FAUCET W/ SERRATED HOSE END, PP INTERNALS AND INLET/OUTLET TUBES.

						VAC	UUM	PUM	P SC	HEI	DULE						
				RECEIVER	QUANTITY		SY	STEM CAPAC	ITY			MOTOR	(EACH)			OPER.	
TAG	EQUIPMENT	LOCATION	TYPE	SIZE (GALS)	ON STANDBY	EMERGENCY POWER	VACUUM (IN. HG)	CAPACITY (CFM)	SYSTEM BTU/HR	H.P.	VOLT	PH	HZ	OPER RP M	DBA LEVEL	WEIGHT LBS	REMARKS
LVP 1	LABORATORY VACUUM PUMP	ROOF	OIL-LESS CLAW	120	1	YES	24	38	10,994	5.4	480	3	60	1800	79	2,550	DUPLEX OIL-LESS CLAW, EXPANDABLE TO TRIPLEX, SINGLE POINT CONNECTIONS, NEMA 12 CONTROL PANEL, VARIABLE SPEED DRIVE, EXHAUST MUFFLER

			l	GAS/L	IQ. M	ANIF	OLD SC	HED	ULE						
						SYSTEM C	APACITY		ELECT	RICAL	_		OPER.		
MARK	DESCRIPTION	TYPE	LOCATION	EMERGENCY POWER	SERVICE	PRESSURE (PSIG)	NO. DEWARS/ CYLINDERS	VOLT	PH	CY	AMPS	AUDIBLE ALARM DBA	W EIGHT LBS	REMARKS	DETAIL
LN 1	FULLY AUTOMATIC SWITCHOVER MANIFOLD FOR LIQ. CYLINDERS - TEMP- ACTUATED	LIQ/LIQ AUTO SWITCHOVER	C250, C143A	NO	LIQ N2	235	1+1	120	1	60	10	85	40		
(CO2)	FULLY AUTOMATIC SWITCHOVER MANIFOLD FOR GAS CYLINDERS	GAS AUTO SWITCHOVER	C248	NO	CO2	55	7+7	120	1	60	10	85	35		2 RP-402

								GAS	FIRED	CAW (ER HI	EATE	R SCH	IEDUL	E			
			RECOVERY	DOMESTI	C WATER	GAS INPUT		DIMENSIONS (INCHES)		С	ONTROL CIRCU	JIT	FLUE DIA.	COMBUSTION	CONNECTION TO BMS	OPERATING	SPECIFICATION	
TAG	LOCATION	STORAGE	G.P.H. AT 60 DEG-F RISE	TEMP. IN	TEMP. OUT	(BTUH)	DEPTH	WIDTH/DIA	HEIGHT	H.P.	VOLTAGE	PHASE	IN	AIR SQ.IN.	(YES - NO)	WEIGHT (LBS)	SECTION NO	REMARKS
GWH 1	ROOF	40	43	50	120	40,000	25" 635MM	23 1/4" 591MM	61 3/4" 1568MM	-	120	1	4	144	NO	500	223400	PROVIDE 7-DAY/24 HR TIMECLOCK INTERLOCKED WITH CIRC PUMP. PROVIDE CONDUIT FOR LOW VOLTAGE WIRING BETWEEN AQUASTAT, TIMECLOCK, CIRC PUMP.

2. LABORATORY GASES AND ICW PIPING ARE PRE-PIPED WITHIN THE HOOD TO A POINT OF CONNECTION SPECIFIED BY THE MANUFACTURER.

1. HEATER SHALL BE SCAQMD APPROVED AND SHALL COMPLY WITH SEC TITLE 24.
2. PROVIDE WITH CIRCULATING PUMP.
3. PROVIDE WITH EXPANSION TANK.
4. PROVIDE SEISMIC BRACING.
l

5. PROVIDE WITH PRESSURE TEMPERATURE RELIEF VALVE.
$oxed{6}$. THE TIMECLOCK WILL BE USED TO SET AND ADJUST THE STARTING OF THE CIRCULATION PUMP

TAG EQUIPMENT SERVICE STAND BY MOTOR DATA HP VOLTS PHASE CAPACITY (GPM) RPM FEET HEAD LOCATION OPERATING WEIGHT (LBS) POWER REMARKS GRUNDEOS STAINLESS LIP(S) MODEL # LIP15-29SILC/TLC INTEGRATED REP	CIRCULATING PUMP SCHEDULE															
HP VOLTS PHASE (GPM) (LBS) POWER		REMARKS			LOCATION	EAD	EEET HEAD	DDM	CAPACITY	CAPACITY			STAND BY	SERVICE	FOLUPMENT	TAG
GRUNDEOS STAINLESS LIP(S) MODEL # LIP15-29SUC/TLC INTEGRATED REL		TALM/ UNIX	POWER	(LBS)	LOCATION	LAU	FEET HEAD	KFW	(GPM)	PHASE	VOLTS	HP	OTAND DI	SERVICE	EQUI WENT	1710
PUMP WATER - 1/20 120 1 5 3500 8 ROOF 20 NO QUICK CONNECT TERMINALS MAX.FLUID TEMP 150°F (65°C), MIN.FLUID TEM	OVABLE CHECK VALVE W/ PERATURE 36°F (2°C)	GRUNDFOS STAINLESS UP(S) MODEL # UP15-29SUC/TLC INTEGRATED, REMOVABLE CHECK VALVE V QUICK CONNECT TERMINALS MAX.FLUID TEMP 150°F (65°C), MIN.FLUID TEMPERATURE 36°F (2°C)	NO	20	ROOF		8	3500	5	1	120	1/20	-	DOMESTIC HOT WATER	CIRCULATION PUMP	CP 1

			F	UME	HOOD	PLUN	BING	ROU	GH-IN	SCHE	DULE					
SYMBOL	FUME HOOD NAME								ROUGH-IN C	ONNECTIONS						
		QTY.	SIZE	N2		LV		NG		ICW		CUP SINK		ARWP	ARWV	REMARKS
				R	L	R	L	R	L	R	L	R	L	T ARVVE	ARVV	
FH-1	BENCH-TOP HOOD	4	4'	-	-	1	1	-	-	-	-	-	-	-	-	2
BSC-1	BIO-SAFETY HOODS	2	-	-	-	1	1	-	-	-	-	-	-	-	-	2
BSC-2	BIO-SAFETY HOODS	2	5'	-	-	1	1	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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